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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,592	02/11/2002	Zhigang Qi	HPC-116	1807

7590 01/12/2004  
Mark Levy  
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EXAMINER
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WINTER, GENTLE E

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 01/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/072,592		QI ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Gentle E. Winter		1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 February 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 2-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 14-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-24 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
 a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                            | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>010204</u> | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1 and 14-24 drawn to a procedure, classified in class 429, subclass 13.
  - II. Claims 2-13, drawn to an electrochemical cell, classified in class 429, subclass 19.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product as claimed can be used in a materially different process of using that product. For instance the electrochemical cell could be operated at sub-ambient or above ambient temperatures.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with David Banner on January 2, 2004 a provisional election was made with traverse to prosecute the invention of Group I, claims 1 and 14-24. Affirmation of this election must be made by applicant in replying to this Office action. Claims 2-13 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 14-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Journal of Electrochemical Society Electrochemical Science and Technology Titled: Methods to Advance Technology of PEM Fuel Cells by E. A. Ticianelli et al and dated September 1988. “Ticianelli” Claim 1 is drawn to a procedure for activating a membrane-electrode assembly (MEA) of an electrochemical cell operating at substantially ambient conditions, said activation procedure including the steps of exposing the MEA to temperature higher than ambient temperature , and substantially simultaneously back- pressurizing gaseous reactants; after the activation of the electrochemical cell, returning conditions of said electrochemical cell to ambient conditions; and operating said electrochemical cell.
6. The prior art teaches exposing a MEA to an elevated temperature and pressure, see page 2210 first column. The operation at the disclosed temperature and pressure ranges reads on the claimed method. With respect to claim 14, the bottom of column 1, page 2210 discloses catalyst that is either supported or unsupported. Claim 15 is similarly anticipated, by the temperature range of 25C (ambient) to 50C (elevated). See page 2210 first column. With respect to claim 16, the reactants are disclosed to be pressurized between 1 and 5 atm. See page 2210 first column. As to claim 17, disclosing less than 5 atms, the range 1-5 atms reads on the claimed

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range. See page 2210 first column. As to claim 18, since the pressure is disclosed to be 5 atms, the difference must be less than 5, additionally column 2 discloses at figure 3 a  $3/5$  atm ratio.

7. With respect to claim 19, disclosing that the activation procedure lasts more than five minutes. The cell is operated at above ambient temperatures and pressures, the cell has a lifespan of more than 5 minutes. With respect to claim 20, the monitoring step arguably is properly the subject of a claim objection for failure to further limit, the monitoring step, itself seemingly is not manipulative, nonetheless the claim limitations are disclosed at column 1 of page 2210 disclosing the use of a IBM-PC. As to claim 21, disclosing that the humidification conditions are controlled, the same is disclosed at column 1 of page 2210, disclosing "optimum conditions for humidification".

8. As to claim 22, disclosing that the cell is operated between a changing load and a constant load. The same is disclosed at the section of column 1 of page 2210 "*Cyclic voltammetry*" and the section under "*Lifetime studies*".

9. As to claim 23, disclosing that the electrodes contain various amounts of catalysts, ionomers, and/or water repelling agents. The same is disclosed at the bottom of column 1 of page 2210, discussing varying the amounts of catalysts, ionomers, and/or water repelling agents. As to claim 24, disclosing that the MEA includes a catalyst coated membrane. The same is disclosed at the top of column 1 of page 2209.

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***Conclusion***

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gentle E. Winter whose telephone number is (571) 272-1310. The examiner can normally be reached on Monday-Friday 7:00-3:30.
2. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.
3. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 273-1310.

Gentle E. Winter  
Examiner  
Art Unit 1746

*Zeinab Elarini*

January 2, 2004

**ZEINAB EL-ARINI  
PRIMARY EXAMINER**